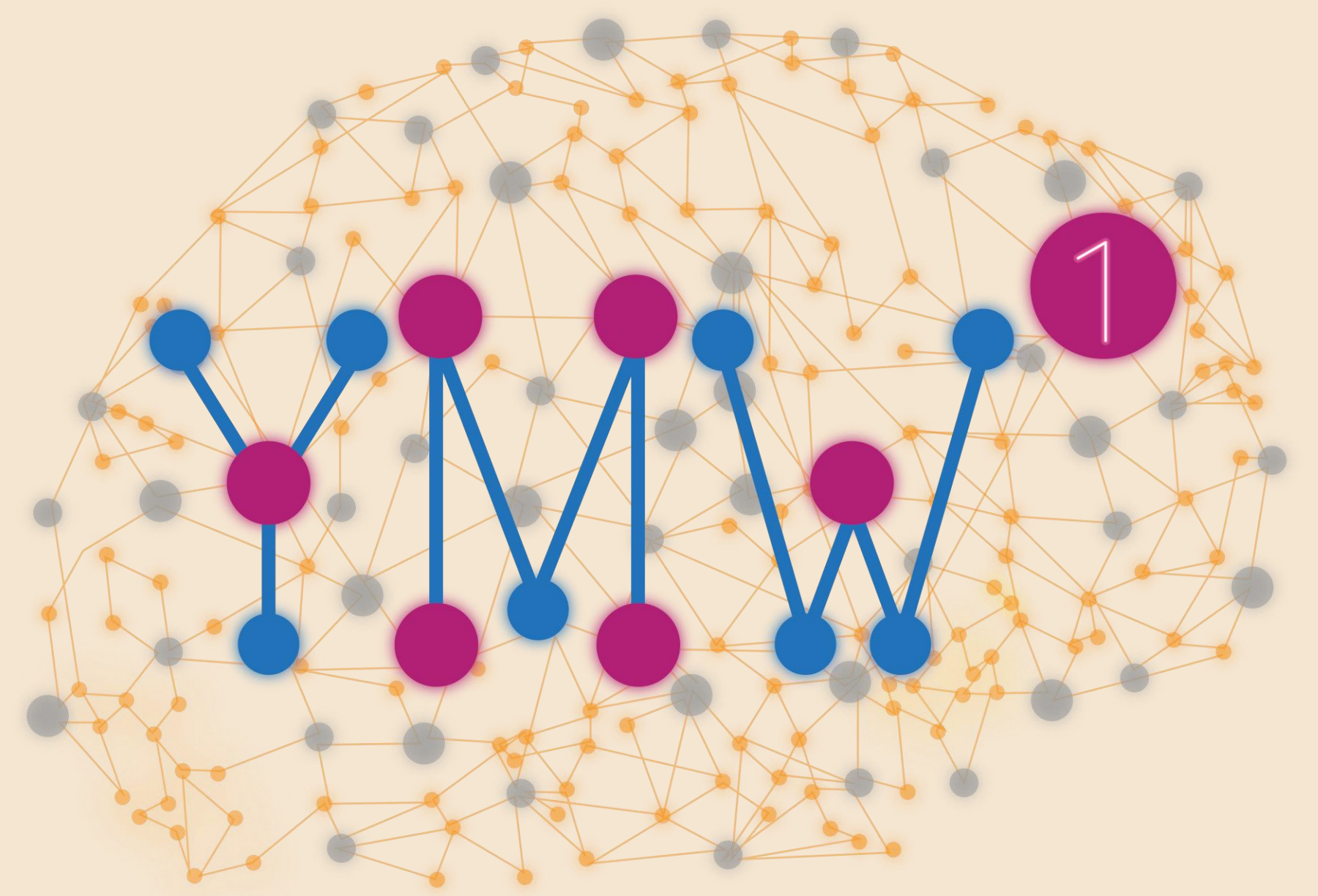


# Young Minds at Work: Blending Biology and Bioinformatics

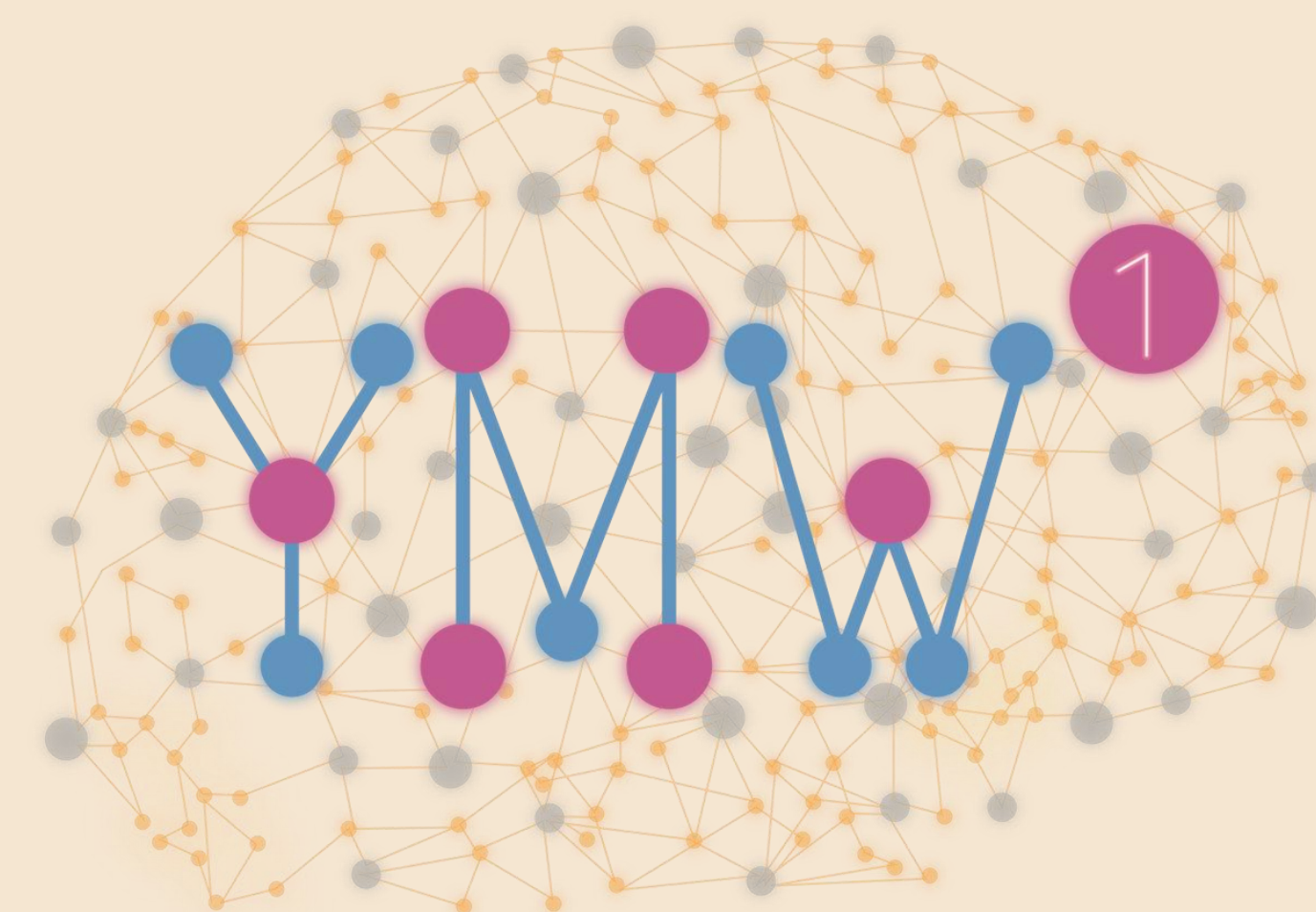
On-line workshop • 16<sup>th</sup> December 2022





## Faculty

Antonello Alice  
Baroni Sara  
Bianchi Francesco Paolo  
Braccini Giulia  
Bugatti Antonella  
Caccuri Francesca  
Calogero Raffaele  
Carbonara Antonella  
Cassaniti Irene  
Cazzaniga Irene  
Cherchi Ilaria  
Chianese Annalisa  
Chiodi Alice  
Cosentini Ilaria  
Cuscianna Eustachio  
D'Accolti Maria  
D'Ursi Pasqualina  
De Bellis Gianluca  
Domenichini Mattia  
Fantoni Tobia  
Forlani Greta  
Fossa Paola  
Fratini Federica  
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Giugliano Rosa  
Loda Alessandra  
Lusardi Matteo  
Mastrangelo Eloise  
Mengoni Claudia  
Messali Serena  
Messina Francesco  
Milanesi Maria  
Nastri Bianca Maria  
Orro Alessandro  
Palmas Vanessa  
Reale Alberto  
Rizzo Roberta  
Rondina Alessandro  
Santoro Silvia  
Scarano Naomi  
Shallak Mariam  
Soffritti Irene  
Strazzabosco Giovanni  
Tathode Madhura  
Tomasoni Zaira  
Tramontano Enzo  
Treccani Mirko  
Uggeri Matteo  
Veschetti Laura  
Zani Alberto  
Zannella Carla



## Rational

The on-line workshop aims to integrate biology and bioinformatics disciplines, encourage, generate, and strengthen a collaborative network and meaningful interactions amongst young scientists that have different skills, promoting future projects and collaborations.

### CONFERENCE CO-CHAIRS

Antonella Bugatti, University of Brescia, Italy  
Francesca Caccuri, University of Brescia, Italy  
Pasqualina D'Ursi, CNR-ITB, Italy  
Paola Fossa, University of Genoa, Italy  
Alessandro Orro, CNR-ITB, Italy

### LOCAL ORGANIZERS

Matteo Gnocchi, CNR-ITB, Italy  
John Hatton, CNR-ITB, Italy

### SCIENTIFIC COMMITTEE

Ilaria Cherchi, Eustachio Cuscianna, Maria Milanesi, Alessandro Rondina, Matteo Uggeri, Laura Veschetti, Alberto Zani, Carla Zannella.



# Scientific Program

08:50-09:00 Access and connection to web platform

## WELCOME ADDRESS

09.00-09.15

BITS President: **Raffaele Calogero**

SIV-ISV Vice-President: **Enzo Tramontano**

ITB-CNR Director: **Gianluca De Bellis**

## INVITED SPEAKER:

**Chairs: Eustachio Cuscianna, Mirko Treccani**

09.15-09.45 **Eloise Mastrangelo**, *Institute of BioPhysics - National Research Council* - Unraveling virus replication processes to identify new therapeutic strategies

## SESSION 1: Two years with SARS-CoV-2: insights into scientific development

**Chairs: Alberto Zani, Maria Milanesi**

09:45-10:00 **Irene Soffritti**, *Section of Microbiology, CIAS Research Center and LTTA, Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara* - Oral microbiome dysbiosis is associated with symptoms severity and local immune/inflammatory response in COVID-19 patients: a cross-sectional study.

10:00-10:15 **Rosa Giugliano**, *Department of Experimental Medicine, University of Campania "Luigi Vanvitelli", Naples* - NGS Analysis of nasopharyngeal microbiota in SARS-CoV-2 positive patients during the first year of the pandemic in Campania Region of Italy.

10:15-10:30 **Maria D'Accolti**, *Department of Chemical, Pharmaceutical and Agricultural Sciences, and LTTA, University of Ferrara, Ferrara* - Shaping the subway microbiome by a probiotic-based sanitation during the COVID-19 emergency.

10:30-10:45 **Tobia Fantoni**, *Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, Verona* - Decay of neutralization activity in vaccines receiving anti-SARS-CoV-2 3<sup>rd</sup> booster dose BNT162b2.

10:45-11:00 **Sara Baroni**, *Department of Molecular Biochemistry and Pharmacology, "Mario Negri" Institute for Pharmacological Research, IRCCS, Milan* - An integrated multidisciplinary platform to develop and validate anti-COVID-19 compounds.

11:00-11:15 **Bianca Maria Nastri**, *Department of Experimental Medicine, University of Campania "Luigi Vanvitelli", Naples* - Short peptides inhibit SARS-CoV-2 infection.

## SESSION 2: Development of novel bioinformatics tools and innovative therapies to target tumors

**Chairs: Greta Forlani, Alessandro Rondina**

11:15-11:30 **Giulia Braccini**, *Institute of Biomedical Technologies, National Research Council (CNR), Pisa research Area, Pisa* - Molecular mechanisms regulating BMI1 in lung cancer.

11:30-11:45 **Mariam Shallak**, *Laboratories of General Pathologies and Immunology "Giovanna Tosi", Department of Medicine and Surgery, University of Insubria, Varese* - The endogenous HBX interactome in ATL leukemic cells reveals an unprecedented complexity of host interacting partners involved in RNA splicing.

11:45-12:00 **Alessandra Loda**, *Department of Molecular and Translational Medicine, University of Brescia, Brescia* - Cancer stem-like cells: a new therapeutic target for the treatment of uveal melanoma.

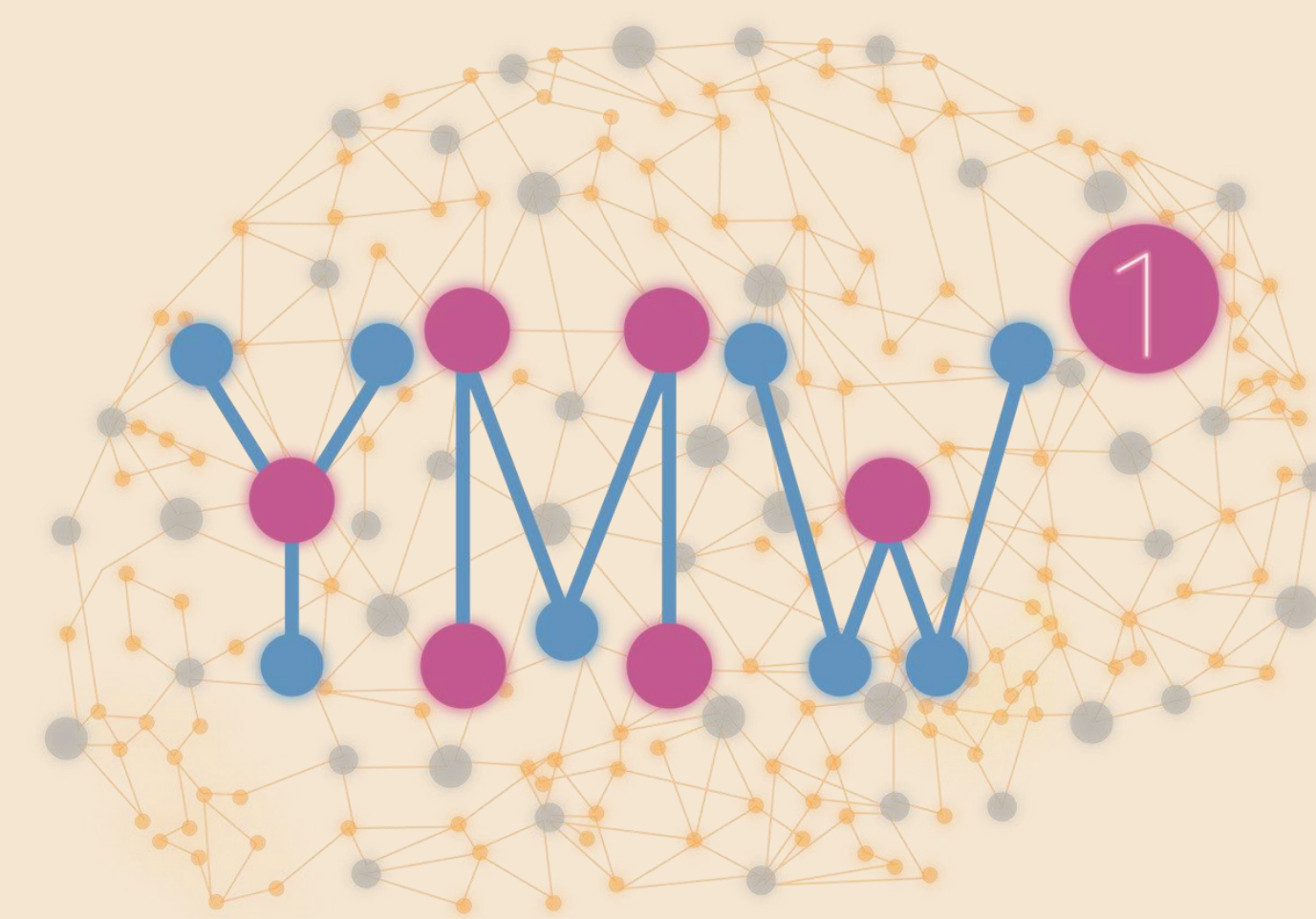
12:00-12:15 **Andrea Gatta**, *Laboratories of General Pathology and Immunology "Giovanna Tosi", Department of Medicine and Surgery, University of Insubria, Varese* - Intracranial injection of CIITA-driven MHC-II positive glioblastoma cells induce an effective anti-tumour immune response in vivo: implication for new therapeutic strategies against the glioblastoma.

12:15-12:30 **Mattia Domenichini**, *Department of Molecular and Translational Medicine, University of Brescia, Brescia* - VEGFR2R1051Q and FGFR1D647N correspondent mutations exhibit pro-oncogenic effects both *in vitro* and *in vivo*.

12:30-12:45 **Madhura Tathode**, *Department of Precision Medicine, University of Campania "Luigi Vanvitelli", Naples* - Identification of prognostic gene markers using transcriptome analysis in hypoxic mesothelioma.

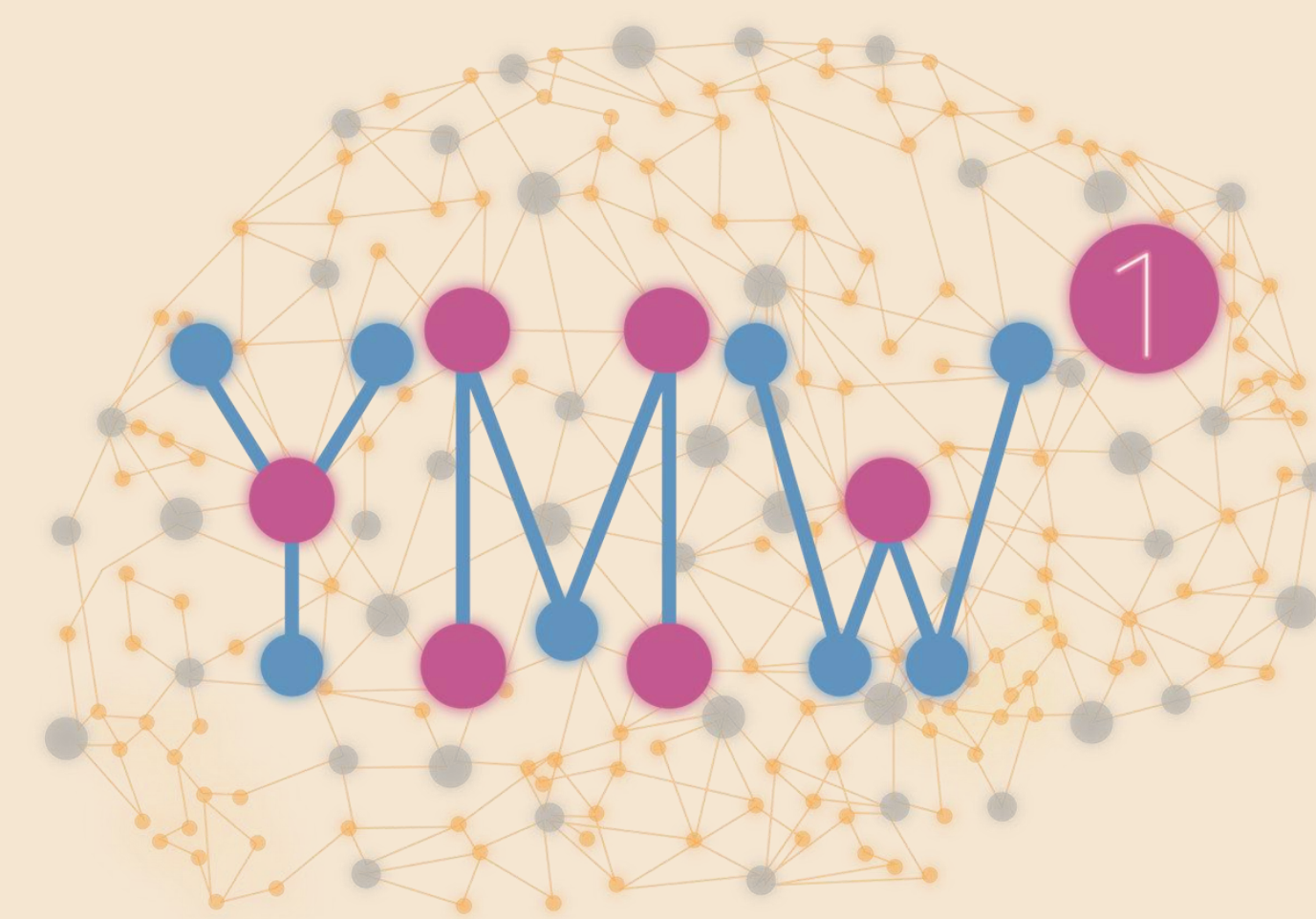
12:45-13:00 **Ilaria Cosentini**, *Department of Biomedical and Biotechnological Sciences, Section of Medical Biochemistry, University of Catania, Catania* - A new computational framework for predicting cancer drug response.

13:00-13:15 **Alberto Reale**, *Department of Molecular Medicine, University of Padua, Padua* - Primary monocytes as carriers for the oncolytic virotherapy of glioblastoma.





# Scientific Program



## LUNCH BREAK

### INVITED SPEAKER:

**Chairs: Irene Cassaniti, Silvia Santoro**

14.15-14.45 **Roberta Rizzo**, *University of Ferrara* - Role of herpesvirus protein in the control of host immune response

### SESSION 3: Omics approaches to study complexity

**Chairs: Serena Messali, Laura Veschetti**

14:45-15:00 **Mirko Treccani**, *GMLab, Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona* - BioVRPi: can bioinformatics and genomics become pocket-sized and affordable to everyone?

15:00-15:15 **Alice Antonello**, *Cancer Data Science Laboratory, Department of Mathematics and Geosciences, University of Trieste, Trieste* - Integrated quality control of allele-specific copy numbers, mutations and tumor purity from cancer whole genome sequencing assays.

15:15-15:30 **Francesco Messina**, *National Institute for Infectious Diseases "Lazzaro Spallanzani", IRCCS, Rome* - Multilevel computational approach on transcriptomic data at single cell level in systemic infectious diseases.

15:30-15:45 **Alice Chiodi**, *Institute of Biomedical Technologies, National Research Council (CNR), Segrate, Milan* - Disentangling the interactions between pathways: a case study on breast cancer.

15:45-16:00 **Irene Cazzaniga**, *Institute of Biomedical Technologies, National Research Council (CNR), Milan* - Evaluation of R257C substitution on ACTG2 monomer and filament.

16:00-16:15 **Vanessa Palmas**, *Department of Biomedical Sciences, Microbiology Unit, University of Cagliari, Cagliari* - Gut microbiota markers associated with extreme longevity in healthy Sardinian subjects.

16:15-16:30 **Federica Fratini**, *Italian National Institute of Health (ISS), Rome* - Blending biology and bioinformatics it is mandatory, but statistical significance it is not enough.

### SESSION 4: An overview of therapeutic approaches: from bio- to -informatic

**Chairs: Carla Zannella, Matteo Uggeri**

16:30-16:45 **Francesco Paolo Bianchi**, *Interdisciplinary Department of Medicine, "Aldo Moro" University of Bari, Bari* - Long-term immunogenicity of oral poliomyelitis vaccine (OPV) in a polio-free country.

16:45-17:00 **Annalisa Chianese**, *Department of Experimental Medicine, University of Campania "Luigi Vanvitelli", Naples* - Host defence amphibian peptide and its potential as antiviral agent.

17:00-17:15 **Matteo Lusardi**, *Department of Pharmacy, University of Genoa, Genoa* - Novel amino-pyrazole analogues interfering with cell migration.

17:15-17:30 **Naomi Scarano**, *Department of Pharmacy, University of Genoa, Genoa* - Structure-Based Virtual Screening (SBVS) in flexible systems: the case of SIRT-2.

17:30-17:45 **Giovanni Strazzabosco**, *Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara* - Glicopro, a multi-modulative ocular formulation based on standardized and sterile snail mucus extract.

17:45-18:00 **Zaira Tomasoni**, *Department of Molecular and Translational Medicine, Division of Pharmacology, University of Brescia, Brescia* - Using human induced pluripotent stem cells technology for the study of neuronal alterations and vulnerability to stress in patients with Treatment-Resistant Depression.

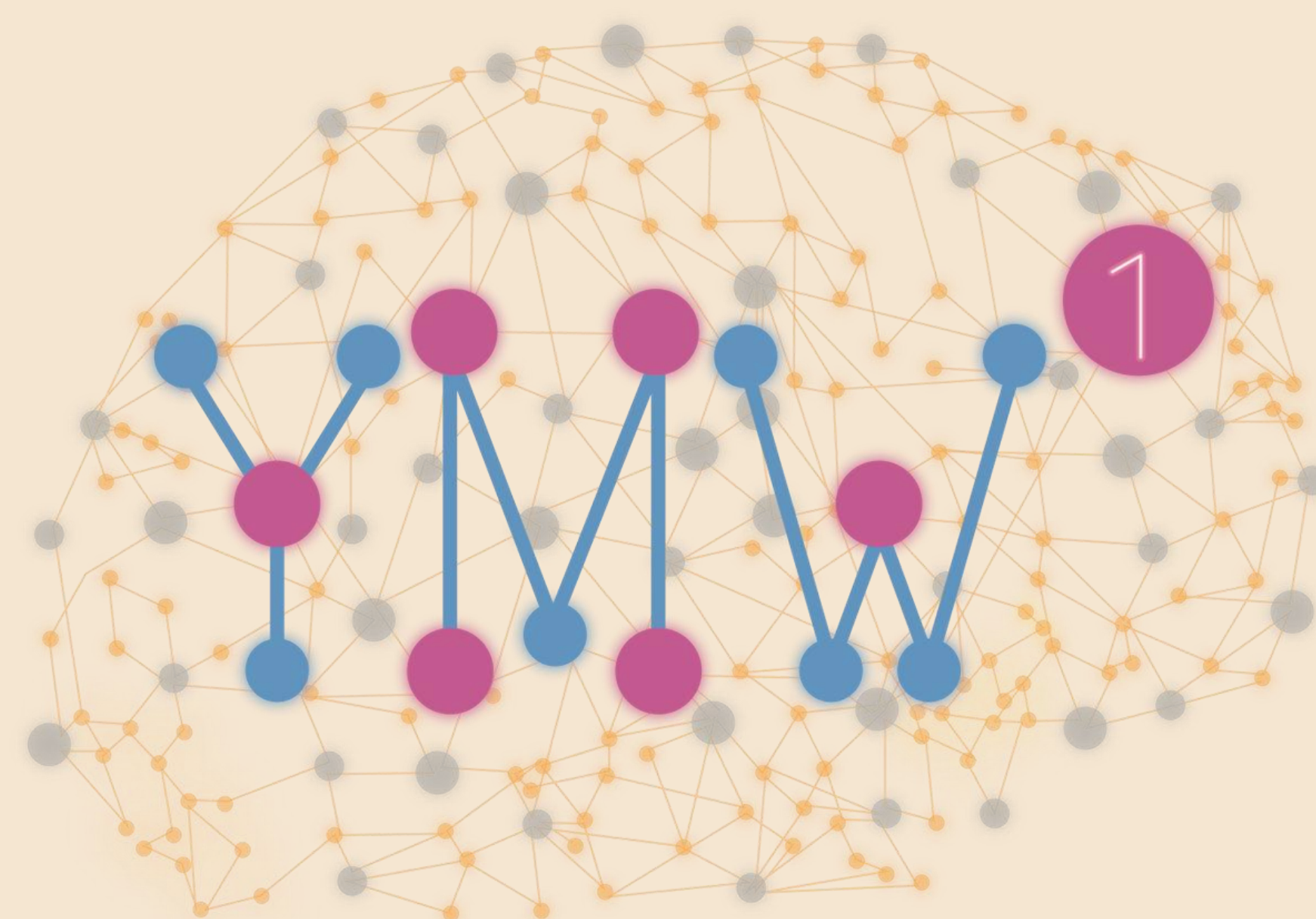
18:00-18:15 **Antonella Carbonara**, *Postgraduate School of Public Health and Preventive Medicine, "Aldo Moro" University of Bari, Bari* - Primary prevention in pregnancy: a blending approach.

### CLOSING REMARKS AND AWARDS

18:15-18:30 **Antonella Bugatti, Francesca Caccuri, Pasqualina D'Ursi, Paola Fossa, Alessandro Orro**



# General Information



## On-line Workshop date:

**16<sup>th</sup> December 2022**

From **09:00** to **18:30**

## Registration guidelines:

The access to the on-line workshop is free, but subject to online registration using the website:

<https://www.blendingbb.it/>

## Guidelines for speakers and chairpersons:

Access to the on-line platform from **08:30**.

(The other on-line workshop participants are kindly requested to access after **08:50**, as reported in the scientific program)

